Lampiran 10 . Reliabilitas Instrumen

DATA UNTUK ITEM GANJIL

| No | NIS | Skor untuk butiran no | | | | | | | | | | | | | | | Skor total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 27 | 29 | |
| 1 | 15164 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 11 |
| 2 | 15165 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 13 |
| 3 | 15166 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 4 | 15167 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 5 | 15168 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 10 |
| 6 | 15169 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 7 | 15170 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 12 |
| 8 | 15171 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 11 |
| 9 | 15172 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 11 |
| 10 | 15173 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 10 |
| 11 | 15174 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 12 | 15175 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 13 | 15176 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 14 |
| 14 | 15177 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 13 |
| 15 | 15178 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 16 | 15179 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 17 | 15180 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 13 |
| 18 | 15181 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 11 |
| 19 | 15182 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| 20 | 15183 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 14 |
| 21 | 15184 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 14 |
| 22 | 15185 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 23 | 15186 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 24 | 15187 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 25 | 15188 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 26 | 15189 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |
| 27 | 15190 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 28 | 15191 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 12 |
| 29 | 15192 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 8 |
| 30 | 15193 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 12 |
| 31 | 15194 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 10 |
| 32 | 15195 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |

Lampiran 10. Reliabilitas Instrumen (Lanjutan)

DATA UNTUK ITEM GENAP

| No | NIS | Skor untuk butiran no | | | | | | | | | | | | | | | Skor total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | |
| 1 | 15164 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 12 |
| 2 | 15165 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |
| 3 | 15166 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| 4 | 15167 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 14 |
| 5 | 15168 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |
| 6 | 15169 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 7 | 15170 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 |
| 8 | 15171 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 9 | 15172 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 10 | 15173 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 13 |
| 11 | 15174 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |
| 12 | 15175 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 13 | 15176 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 14 | 15177 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 15 | 15178 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 16 | 15179 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 17 | 15180 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 |
| 18 | 15181 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 13 |
| 19 | 15182 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 20 | 15183 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 21 | 15184 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 22 | 15185 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| 23 | 15186 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 12 |
| 24 | 15187 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |
| 25 | 15188 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |
| 26 | 15189 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| 27 | 15190 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 12 |
| 28 | 15191 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 13 |
| 29 | 15192 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 11 |
| 30 | 15193 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 11 |
| 31 | 15194 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 13 |
| 32 | 15195 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 14 |

Perhitungan reliabilitas instumen menggunakan r *product moment* dan rumus Spearman Brown

| No | Nis | Ganjil ($X_i$) | Genap ($Y_i$) | $X_i^2$ | $Y_i^2$ | $X_iY_i$ |
|---|---|---|---|---|---|---|
| 1 | 15164 | 11 | 12 | 121 | 144 | 132 |
| 2 | 15165 | 13 | 14 | 169 | 169 | 182 |
| 3 | 15166 | 13 | 11 | 169 | 121 | 143 |
| 4 | 15167 | 13 | 14 | 169 | 196 | 182 |
| 5 | 15168 | 10 | 14 | 100 | 196 | 140 |
| 6 | 15169 | 14 | 15 | 196 | 225 | 210 |
| 7 | 15170 | 12 | 12 | 144 | 144 | 144 |
| 8 | 15171 | 11 | 13 | 121 | 169 | 143 |
| 9 | 15172 | 11 | 15 | 121 | 225 | 165 |
| 10 | 15173 | 10 | 13 | 100 | 169 | 130 |
| 11 | 15174 | 14 | 14 | 196 | 196 | 196 |
| 12 | 15175 | 15 | 13 | 225 | 169 | 195 |
| 13 | 15176 | 14 | 13 | 196 | 169 | 182 |
| 14 | 15177 | 13 | 15 | 169 | 225 | 195 |
| 15 | 15178 | 14 | 14 | 196 | 196 | 196 |
| 16 | 15179 | 15 | 14 | 225 | 196 | 210 |
| 17 | 15180 | 13 | 12 | 169 | 144 | 156 |
| 18 | 15181 | 11 | 13 | 121 | 169 | 143 |
| 19 | 15182 | 12 | 13 | 144 | 169 | 156 |
| 20 | 15183 | 14 | 15 | 196 | 225 | 210 |
| 21 | 15184 | 14 | 14 | 196 | 196 | 196 |
| 22 | 15185 | 15 | 13 | 225 | 169 | 195 |
| 23 | 15186 | 13 | 12 | 169 | 144 | 156 |
| 24 | 15187 | 13 | 14 | 169 | 196 | 182 |
| 25 | 15188 | 13 | 15 | 169 | 225 | 195 |
| 26 | 15189 | 14 | 14 | 196 | 196 | 196 |
| 27 | 15190 | 12 | 12 | 144 | 144 | 144 |
| 28 | 15191 | 12 | 13 | 144 | 169 | 156 |
| 29 | 15192 | 8 | 11 | 64 | 121 | 88 |
| 30 | 15193 | 12 | 11 | 144 | 121 | 132 |
| 31 | 15194 | 10 | 13 | 100 | 169 | 169 |
| 32 | 15195 | 15 | 14 | 225 | 196 | 210 |
| | | $\sum X_i = 404$ | $\sum Y_i = 425$ | $\sum X_i^2 = 5192$ | $\sum Y_i^2 = 5689$ | $\sum X_iY_i = 5390$ |

1. Harga *r* hitung

$$r_{xy} = \frac{N\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{\left\{N\sum {X_i}^2 - (\sum X_i)^2\right\}\left\{N\sum {Y_i}^2 - (\sum Y_i)^2\right\}}}$$

$$r_{xy} = \frac{32x5379 - 404\ x\ 425}{\sqrt{\left\{32\ .\ 5192 - (404)^2\right\}\left\{32\ .\ 5689 - (425)^2\right\}}}$$

$$r_{xy} = \frac{172128 - 171700}{\sqrt{\{166144 - 163216\}\{182048 - 180625\}}}$$

$$r_{xy} = \frac{428}{\sqrt{2928\ .1432}}$$

$$r_{xy} = \frac{428}{\sqrt{4166544}}$$

$$r_{xy} = \frac{428}{2041{,}21}$$

$$r_{xy} = 0{,}2096$$

Kemudian dimasukkan ke dalam rumus *Spearman Brown*,

$$r_i = \frac{2r_b}{1 + r_b}$$

$$r_i = \frac{2\ .\ 0{,}2096}{1 + 0{,}2096}$$

$$r_i = 0{,}3466$$

jadi harga *r* hitung = 0,3466

2. Harga *r* tabel

Berdasarkan tabel *r* product moment dengan n = 32 dan taraf signifikan 5%, maka diketahui harga *r* tabel = 0,349

3. Kesimpulan

Harga *r* hitung lebih kecil dari harga *r* tabel ($r_h$= 0,3466 < $r_t$= 0,349), maka dapat disimpulkan instrumen tersebut reliabel.